



AFD AND INDIA

Focus on Energy



© Yashas Chandra/AFD

7 projects
financed
since 2008

EUR 464 million
of commitments
in 10 years

100%
of these projects have a
positive impact on climate

A partner of India since 2008, AFD works in agreement with Indian authorities to promote green and inclusive growth. It operates through soft loans to the state and public enterprises, as well as technical assistance programs.

Our goal: to contribute to a cleaner and more efficient energy sector and help India achieve its energy transition.

#WorldInCommon



OUR ACTION IN India

1 *Energy: A priority area of intervention*

Since COP 21, India has wanted to establish itself as a world leader in the fight against climate change and the transition towards a resilient and low-carbon economic model.

India's commitment to the development of renewable energy is reflected in its ambitious national targets and the implementation of a comprehensive and concerted policy to combat climate change.

The two main targets for the promotion of renewable energies set by the Indian government are (i) 40% non-fossil energy in the country's electricity mix by 2030 and (ii) 175 GW renewable energy to be installed by 2022, with 100 GW of solar energy (including 60 GW of solar farms and 40 GW of rooftop solar), 60 GW of wind energy, 10 GW of biomass and 5 GW of small hydropower plants.

India has also launched a strategy to adopt more efficient management of its power grids and reduce energy consumption in the country, mainly in the infrastructure and public buildings' sectors, but also in industry and agriculture.

Ever since the launch of these activities in India in 2008, the promotion of renewable energies and energy efficiency has been one of AFD's priority areas of intervention.

Today, projects in this sector account for 26% of the New Delhi Agency's portfolio, with a total commitment amount of 464M €. Its financial instruments, including non-sovereign loans and green lines of credit, support financial institutions and public enterprises engaged in the government's energy transition efforts.

2 *The promotion of investments and innovations in energy efficiency*

Through its green finance label SUNREF, AFD has helped many small and medium enterprises (SMEs) access finance through the public financial institution SIDBI to kick-start their energy efficiency projects

Through SUNREF, AFD also supports the National Housing Bank (NHB), to stimulate the dissemination of energy saving and environment friendly measures in the housing construction sector.

We support the public energy service company Energy Efficiency Services Limited (EESL) to promote investments in energy savings for street and domestic lighting.

3 *The diversification of India's energy mix through the development of renewable energies*

We partner with the Indian Renewable Energy Development Agency (IREDA) to implement projects led by private developers in the fields of solar, wind, biomass and small-scale hydro projects.

AFD works with Himachal Pradesh Power Corporation Limited (HPPCL) to develop the state's clean energies through the construction of two run-of-river hydropower plants.

4 *Strengthening technical cooperation between France and Indian government agencies specialising in the promotion of renewable energies*

In 2017, AFD has mobilised a Euro 1 million grant for technical cooperation to support innovative solutions for the development and efficient utilization of solar energy in India. This technical cooperation will be implemented through two partnerships:

- ▣ with SECI (Solar Energy Corporation of India Ltd.) for promoting innovative solutions and technologies in the Solar field, especially floating solar and solar/wind hybrid storage solutions; and
- ▣ with the French CEA (Alternate Energies and Atomic Energy Commission) and Indian NISE (National Institute of Solar Energy) to facilitate the establishment of high-efficiency photovoltaic technologies.

5 *Contributing to The International Solar Alliance (ISA)*

India's commitment to the development of renewable energies has been confirmed by the launch of the International Solar Alliance as sought by Prime Minister Modi and supported from the start by France. It is based on the desire to federate the efforts being made by developing countries to attract investment and technology in the solar sector and develop this energy.

At the founding summit of the ISA in March 2018, France's President Emmanuel Macron set a target for AFD to raise € 1 billion of funding for solar projects in ISA's target countries for the period 2016-2022.

With more than € 800M of financing already achieved over the 2016-2018 period, AFD is poised to achieve this goal, three years earlier than initially planned.

INDIA

Combating climate change through the promotion of renewables



© Yashas Chandra/AFD

AFD has partnered with the public Indian development bank IREDA to finance the production of electricity from renewable resources.

BACKGROUND

Accounting for strong economic and demographic growth, the country's energy needs are expected to double by 2035. In addition, the high proportion of fossil fuels in the national energy balance is increasingly contributing to climate change.

These energy trends pose an environmental threat. Indeed, India has become the world's third largest greenhouse gas-emitter, and has one of the highest emission growth rates in the world.

In order to achieve energy security and to develop a low carbon economy, India has decided to capitalize on its strong renewable energy potential, with the aim of reaching 40% of its power generation capacity through non-fossil resources by 2030.

DESCRIPTION

IREDA (Indian Renewable Energy Development Agency) is a public financial institution set up by the government of India to promote renewable energy development and energy efficiency projects.

In order to assist the institution in achieving its goals, AFD has provided IREDA with financial and technical support.

The first funding awarded to IREDA in 2010 resulted in the implementation of eleven projects led by independent energy producers, ranging from biomass to small-scale hydroelectricity, wind farms, and solar photovoltaic projects.

This success has led AFD and IREDA to renew and extend the scope of their cooperation. In 2013, AFD allocated to IREDA a new credit line, with a focus on the development of solar power plants. A technical assistance programme has been implemented together with this line.

IMPACTS

- ➔ Diversification of the energy mix and reduction of greenhouse gas emissions through the development of 19 renewable energies projects (233 MW)
- ➔ Developing access to cheap and climate-friendly energy for the population
- ➔ Creation of new employment opportunities
- ➔ The management of IREDA's operations has been strengthened

Country

India



Location

New Delhi



Sectors

Energy, Climate



Financing tool

Green credit lines



Amount financing

170M€

Funding duration

10 Years

Beneficiaries

IREDA



Project start date

10/12/2010

INDIA

Supporting energy efficiency through an innovative financial model



© Yashas Chandra/AFD

AFD supports the implementation of energy saving measures by public entities assisted by EESL, an energy services company.

BACKGROUND

Energy savings are an essential part of the Indian government's plan to limit the environmental and financial costs of the country's development. In 2010, a comprehensive strategy was adopted: the National Mission for Enhanced Energy Efficiency. It aims to reduce energy consumption in the country, mainly in the infrastructure and housing sectors, as well as in industry and agriculture.

An Energy Services Company (ESCO) is a company which offers energy savings solutions. ESCOs bear the technical and financial risks of implementing large-scale energy efficiency projects for their customers. The savings generated in energy costs are then used to pay back the investment. This outsourcing makes it possible for ESCOs to achieve significant economies of scale and to reduce the investment costs in low consumption systems.

DESCRIPTION

In 2009, the Indian government set up the Energy Efficiency Services Limited (EESL) in order to facilitate large-scale implementation of energy efficiency projects for public entities.

AFD supports EESL through fundings of projects and a technical assistance programme. As part of EESL's national programme for rolling out energy efficiency measures in street lighting systems, the municipality of Jodhpur benefitted from AFD funding to replace conventional street lights with 60,000 energy-efficient LED bulbs, slashing the energy consumption by 55%.

The technical cooperation programme resulted, for example, in a study trip to France on energy efficiency in street lighting for EESL employees and Indian senior civil service officials in September 2015.

IMPACTS

- ➔ Promote an innovative way of financing energy efficiency projects in India
- ➔ 190,000 tonnes CO₂ equivalent per year are expected to be avoided thanks to AFD's funding
- ➔ Sharp reduction in the city of Jodhpur's overall energy consumption
- ➔ The living conditions of Jodhpur's inhabitants have also improved as the streets are now considered safer, particularly for women. It has also created new opportunities for street vendors
- ➔ Promote exchanges of experience between France and India

Country

India



Location

New Delhi



Sectors

Energy, Climate



Financing tool

Concessionnal sovereign loan



Amount financing

50M€

Funding duration

5 Years

Beneficiaries

Energy Efficiency Services Limited (EESL)



Project start date

09/04/2015

INDIA

Promoting energy efficiency for small and medium-sized enterprises



AFD supports the sustainable growth of Indian SMEs through energy efficiency projects financed by SIDBI.

BACKGROUND

Indian SMEs are a major engine of India's economic growth. They have a direct impact on both employment and energy consumption in the industrial sector.

SMEs have substantial potential for energy savings. However, until recently, return on investment for energy efficiency was not valued by industries or financial institutions, which are generally reluctant to finance this type of investment.

The financial institution Small Industries Development Bank of India (SIDBI) was set up by the government of India to promote and refinance the SME sector. SIDBI has recently defined the green economy sector as a strategic focus for growth in its activity. This includes promoting energy efficiency and renewable energies.

DESCRIPTION

The loan allocated to SIDBI by AFD has allowed it to bring a technical and financial support to the sustainable growth of Indian SMEs, by financing investments in high energy performance equipment.

Owing to French expertise in energy efficiency, a technical assistance component has built the capacities of SIDBI's Energy Efficiency Unit, raised SMEs' awareness of energy efficiency issues, and evaluated the project's environmental impacts.

The project has benefited over 400 projects nationwide and in various sectors, such as ceramics, textiles, foundry and metallurgy.

IMPACTS

- More than 400 Indian SMEs have received support for the implementation of actions that lead to a reduction in their specific consumption and thereby limit their greenhouse gas emissions, without hampering their growth.
- The energy saved thanks to this financing is estimated at 84.3 GWh a year.

Country

India



Location

Mumbai



Sectors

Energy, Climate



Financing tool

Concessionnal non-sovereign loan



Amount financing

50M€

Funding duration

3 Years

Beneficiaries

SIDBI



Project start date

14/05/2010

INDIA

Developing hydropower In Himachal Pradesh



© HPPCL Shimla

AFD is assisting the Indian government with its objective of increasing the share of renewable energies in its energy mix. The objective: ensure the country's energy security, while taking advantage of its huge hydropower potential.

BACKGROUND

The rapid development of India's economy leads to a sharp increase in energy demand. As 57% of power generation is currently based on coal and 7% on gas, the sector accounts for 40% of the country's greenhouse gas emissions. Another major challenge for the country is its energy security, as India is relatively lacking in fossil fuels. In this context, the Indian government has launched an ambitious policy to develop alternative energies.

India's hydropower fleet has a capacity of 45 GW (13% of installed capacity), with a potential estimated at 145 GW. The main development opportunities are to be found in the North, East and Northeast states. In Himachal Pradesh, the potential is estimated at 23 GW, including 11 GW under development.

Himachal Pradesh Power Corporation Limited (HPPCL), a State-owned company, is participating in 21 medium-sized projects under the development programme, with a total new capacity to be installed of 3 GW.

DESCRIPTION

The project aims to finance two run-of-river hydropower plants, Chanju III (48 MW) and DeothalChanju (30 MW), located upstream from each other in the Chanju river basin. They will be built and operated by HPPCL.

The headrace tunnels for these two power plants will be entirely underground, which will minimize their environmental impact.

A technical assistance program, benefiting from France's experience in the field of hydropower, is being implemented to build the capacities of HPPCL in terms of financial planning, and optimizing the generation and maintenance of the plants. This technical assistance has materialized through the organization of a study trip to France for seven executives from HPPCL in June 2017.

IMPACTS

- ➔ Development of the hydropower potential of the state of Himachal Pradesh
- ➔ Production of low-carbon, reliable electricity to meet the growing needs of the population
- ➔ Sharing French expertise in the hydropower sector through technical assistance
- ➔ Reduction in CO₂ emissions estimated at 276,000 tonnes of CO₂ equivalent per year

Country

India



Location

Himachal Pradesh



Sectors

Energy, Climate



Financing tool

Concessionnal sovereign loan



Amount financing

80M€

Funding duration

20 Years

Beneficiaries

HPPCL



Project start date

04/07/2017

INDIA

Managing the environmental impacts of housing



© Prashanth Vishwanathan/AFD

AFD supports the development of affordable green housing which addresses the environmental and social challenges in India.

BACKGROUND

India has a huge shortfall of housing, mainly in its urban areas and for populations with modest income levels: 70% of the housing which will exist in 2030 are yet to be constructed. The Indian government thus wishes to encourage large scale construction of affordable housing units.

However, the construction sector is a major consumer of energy and has major adverse impacts on the environment and climate change. Throughout their life cycle, buildings use up important resources (energy, water, material...) and release solid and liquid wastes. Thus in India the construction and housing sector consumes about 34% of the electricity generated and contributes to around 23% of the greenhouse gas emissions.

The number of buildings conforming to green labels covers only about 1% of the urban buildings in the country.

DESCRIPTION

Through its green finance label SUNREF, AFD supports the National Housing Bank (NHB), a public financing institution whose role is to ensure the regulation and promotion of housing finance in India.

This project aims to stimulate the dissemination of energy saving and environment friendly measures by adopting recognized labels and to strengthen the capacities of the players in the construction and financial sectors.

It consists of:

- An AFD credit line to NHB for financing the construction and acquisition of green housing units whose eligibility depends on the social, energy and environmental performance of the buildings
- A subsidy by the European Union to help fund the additional costs for implementing the labels
- A technical assistance component and capacity building funded by an European grant meant for different players operating in the sector (promoters, decision makers, financiers...)

IMPACTS

- ➔ The SUNREF Housing India program aims to soften the adverse impacts of the construction sector on the environment, through a reduction in water consumption, in generation of waste and in CO₂ emissions.
- ➔ 12,000 households will benefit from improved housing.

Country

India



Location

Delhi



Sectors

Sustainable cities, Energy, Water and sanitation



Financing tool

AFD Sovereign concessional loan and European Union grant



Amount financing

100M€

Financial Partner

European Union (12M€ grant)

Funding duration

5 Years

Beneficiaries

National Housing Bank (NHB)



Project start date

20/07/2017



Co-funded by the European Union

AFD is an inclusive public financial institution and the main actor in France's development policy. It makes commitments to projects that genuinely improve the everyday lives of people, in developing and emerging countries and in the French overseas territories.


AFD works in many sectors – energy, health, biodiversity, water, digital technologies, training – and supports the transition to a safer, more equitable and more sustainable world: a world in common. Its action is fully in line with the Sustainable Development Goals (SDGs).

Through its network of 85 agencies, AFD operates in 115 countries and is currently supporting over 4,000 development projects. In 2018, it earmarked EUR 11.4bn to finance these projects.

**AGENCE FRANÇAISE
DE DÉVELOPPEMENT
(AFD) - INDIA**

112 Malcha Marg, Chanakyapuri,
New Delhi 110021, INDIA
Tel: + 91 11 4279 3700
afdnewdelhi@afd.fr

 Website: india.afd.fr

 Facebook: [@AFDOfficiel](https://www.facebook.com/AFDOfficiel)

 Twitter: [@AFD_en](https://twitter.com/AFD_en)